

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
10 February 2005 (10.02.2005)

PCT

(10) International Publication Number
WO 2005/013633 A1

(51) International Patent Classification⁷: H04Q 7/38, H04B 7/00

(21) International Application Number: PCT/AU2004/001025

(22) International Filing Date: 3 August 2004 (03.08.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data: 2003904045 4 August 2003 (04.08.2003) AU

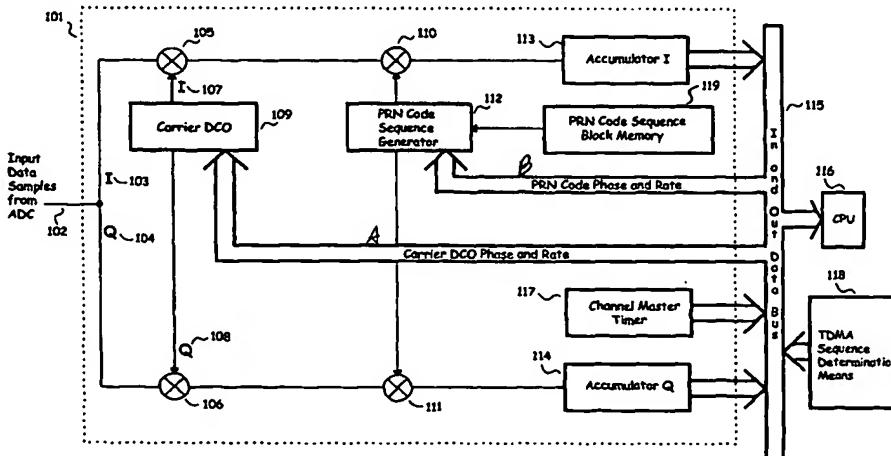
(71) Applicant (for all designated States except US): LOCATA CORPORATION [US/US]; 9 Island View, Irvine, CA 92604 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): LAMANCE, James [US/US]; 2000 Wisteria Drive, Hixon, TN 37343 (US). SMALL, David [AU/AU]; Unit 63, 13-15 Sturt Avenue, Griffith, ACT 2603 (AU).

(74) Common Representative: SMALL, David; 401 Clunies Ross St, Acton, ACT 2601 (AU).

(54) Title: A SYSTEM & METHOD FOR THE MITIGATION OF CDMA CROSS-CORRELATION ARTIFACTS AND THE IMPROVEMENT OF SIGNAL-TO-NOISE RATIOS IN TDMA LOCATION NETWORKS



(57) Abstract: A correlation system for Time Division Multiple Access (TDMA) positioning systems is disclosed, whereby a position receiver acquires, tracks, and demodulates a plurality of Code Division Multiple Access (CDMA) modulated positioning signals are pulsed in a Time Division Multiple Access (TDMA) scheme. A specialized correlation processor within the position receiver is configured to internally generate pseudo random number (PRN) code signal replicas of Code Division Multiple Access (CDMA) positioning signals in synchronicity with their respectively received Time Division Multiple Access (TDMA) positioning signals. This correlation system provides the position receiver with range measurements free from the deleterious effects of Code Division Multiple Access (CDMA) cross-correlation artifacts and degraded signal-to-noise ratios, therefore allowing the computation of high accuracy position solutions.